Systems And Problem Solving- Part 3

By Thomas Park

What could cause basic properties such as the symmetric, reflexive or commutative not to function?

These properties, after all, are very simple, and seem self-evident.

a = a
If a = b, then b = a
If a = b and b = c, then a = c

For such properties to fail to function would require contact with a system (or systems) outside of basic mathematics.

One example of such a influence might be time.

If a particular ice cube is “a”, then, 5 minutes later, “a” might represent a puddle of water. Time influences the reflexive property-- it causes complications. The puddle of water both is and is not the ice cube-- to refer to both as “a” becomes a logistical difficulty.

Things go similarly with the other basic properties. Identity is complicated by time, so properties dependent on identity are become complicated.

One can see, then, that logic and basic mathematical properties exist in a sort of ideal space-- in a dimension of thought and discourse such as defined by Plato.

How is this? As time complicates even the most basic of properties, and time (as we think of it), is omnipresent-- then, logically, these properties cannot be maintained in a real-life situation. Time is ALWAYS a variable in this material world-- it can only be disregarded in theory.

However, rules of math and logic are useful as tools for discourse and problem solving. As long as various parties agree to the terms and conditions of logic, it can be used to resolve any number of difficulties.

My main point in bringing up time and showing the limits of basic properties is to show that logic cannot be perfectly realized in a material sense. This is important to consider if one is gathering and/or interpreting data, or trying to resolve particular issues in the “real world”.